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ABSTRACT OF THE DISCLOSURE

A method for stabilizing a multi-layered dielectric reflectivity coating subject to compaction/densification upon exposure to DUV or shorter wavelength light, is disclosed which may comprise: applying the reflectivity coating to a reflective surface forming a coating bulk on the surface; exposing the coating bulk to a pretreatment of a sufficient amount of DUV radiation to induce sufficient densification in enough of the coating bulk to inhibit subsequent densification during continued exposure to DUV or shorter wavelength radiation. The method may also comprise the pretreatment radiation exposure amounting to energy of at least the equivalent of about 2Bp at 9mJ per pulse. The method may also comprise the pretreatment radiation exposure amounting the energy being delivered in at about 3KHz pulse repetition rate. The method may also comprise the pretreatment radiation exposure amounts to energy of at least the equivalent of 15-18 mJ per pulse delivered over about 700 M – 1 B pulses, i.e., about 4 days at 3Khz or 2-3 days at 4Khz pulse rates.

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